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PRACTICAL OBSERVATIONS
ON THE
MANAGEMENT OF RUPTURES :

IN TWO PARTS.

Part. I. New Inventions and Directions for ruptured Persons.
Part. II. A familiar Account of the Nature of Ruptures in both Sexes.

.....

BY WILLIAM HALL TIMBREL, ESQ.

TO WHICH ARE PREFIXED
TWO RECOMMENDATORY LETTERS

BY WILLIAM BLAIR, A. M.

Member of the Royal College of Surgeons; Fellow of the Medical Societies
of London, Paris, and Brussels; Surgeon of the Lock Hospital and
Assylum, and of the Bloomsbury Dispensary, etc.

FROM THE LAST LONDON EDITION.

With Engravings.

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PREFACE

TO THE THIRD LONDON EDITION

WITH painful reluctance I disturb a repose necessary to an enervated constitution, by presuming to address the world, without even the inducement of professional fame or emolument: nothing could have influenced me to appear at the bar of a public tribunal but the magnitude of the subject, the Life of Man, and an experimental conviction in my own case, as well as in a great variety of others, that the ruptured man is unnecessarily living miserably or dying prematurely, from the usual construction and application of trusses.

I think with M. LE DRAN, as quoted by ARNAUD, " Whatever tends to the preservation of the Life of Man, cannot be put in too clear a light ; and, to conceal from the world any learning which may be useful to society, is the same treason against the public, as to bury a treasure. Let us avoid imitating such as are avaricious of their knowledge, and whose despicable jeal-

ousy would rejoice to see the world in the darkest ignorance, for the sake of engrossing to themselves the public confidence." *Le Dran, Præfat. 2. Observ.*

I do not arrogate to myself superior intelligence or powers, and candidly own my improvements are the result of accident and necessity (the mother of invention), as well as of experiment. A *wearer* of trusses *must* have ideas that can only be obtained by wearing such an instrument: even a horse, could he speak, would pronounce which was the best saddle.

Long after my methods were executed, I was much pleased, accidentally to find that I had adopted the *old* system of firmness, and the mode of wearing a truss, of an eminent French Surgeon, who practised about the year 1726; and whose work, translated from the French, was published by MILLAR, in the Strand, 1748, entitled "*A Dissertation on Hernias or Ruptures*, in two parts, by GEORGE ARNAUD, Master of Arts and Surgery; Member of the Royal Academy of Surgery, at Paris; Demonstrator in the School of St. Côme; Surgeon for Ruptures of the Hospitals of Hôtel-Dieu; the Invalids and Incurables of the City of Paris; and of all the Military Hospitals in

France." I was charmed with the discovery, as I can speak in stronger terms of the system of another; and, being the system of a professional man, I hoped it would attract the notice of professional men: yet, I must do myself the justice to say, that Mons. ARNAUD's system is *completely* executed by means of the calico cushion, and which it could not have been without it.

At page 194 of ARNAUD's Dissertation, he says, "These measures ought to be divided between the surgeon and patient, till the truss has acquired a *firm invariable* situation:" my expression was *immoveable*.

Page 203, he says, "We are to observe, whether the edge of the girdle is *immediately* above the fissure of the buttocks; if it is not so, we must carefully place it there, and the cushion will be in the just and proper position for stopping up the aperture of the hernia."

Page 206, he says, "as the truss is made to stop up the hole which gives a passage to the parts, so it is necessary that the cushion, (*i. e.* pad of the truss), should be placed directly on the hole, not *under* it."

I do not exactly understand Mr. ARNAUD, when he talks about "bending the iron till it

fits ;” but the elasticity of our modern trusses, renders such an inquiry unnecessary.

From the number of impositions that have appeared in the world, on the subject of Rupture, one’s mind is almost paralysed. I owe too much respect to the world and myself to trifle ; I will assert, therefore, from my own experience and that of many others, that during the most laborious exertions, my instructions being observed, a reducibly ruptured patient, (the vertebræ and pelvis being naturally formed), may be as free from pain or danger, either from the disease or the instrument, as if he had no complaint at all.

Where the back is quite straight, and there is no projection of the posteriors, or of the lower hip-bones, (the great trochanters), I will not say but the truss *may* slip ; yet, even in such a case, it has succeeded. Where men are formed in the usual manner, I aver that it cannot move.

“ Great leanness and excessive fatness are inconveniences, with respect to the disorder, which oppose the stability of the truss and renders its use difficult.”

ARNAUD.

I have the honour to inform the public, that my methods have been adopted, after an investigation as to fact, with that liberality of sentiment which ever accompanies great minds, by some of the first medical characters in this metropolis.

To the two gentlemen who have lately honoured me with certificates of the success of these improvements in their practice, I am particularly obliged.

Obvious circumstances of delicacy prevented me hitherto from putting my name to this publication ; which I *now* avow, from the propriety of adding to its publicity, however disagreeable to my own feelings.

Indeed, this consideration is trifling, when I reflect on the object, and the few fleeting years I may remain in the present world.

To conclude, in the words of ARNAUD, "I have, with great diligence, communicated to the public whatever my particular application has enabled me to discover."

W. H. TIMBREL.

London, May, 1803.

COPIES OF TWO
RECOMMENDATORY LETTERS

TO THE AUTHOR,

FROM

WILLIAM BLAIR, ESQUIRE,

SURGEON OF THE LOCK HOSPITAL AND ASYLUM,

&c. &c. &c.

OCTOBER 31, 1801.

Great Russel Street, Bloomsbury Square.

DEAR SIR,

I THINK myself honoured by the wish you have expressed, that I would permit you to use my name as a recommendation of your pamphlet; but I am not quite reconciled to the idea of appearing very prominent, least the purity of my motives should be questioned:

I have several times employed the trusses as recommended by you, which admirably well answered my wishes ; and I have even found your calico pads *alone*, when applied to an old worn-out truss, produce the most decided advantages, in keeping up a Rupture of long standing.

The principal benefit I have derived from your instructions and friendly intercourse, has been in the mode of applying the truss, not obliquely or spirally, as is usual, but after the manner described by MONS. ARNAUD ; so that the line formed by the hoop or spring is exactly in a horizontal or circular direction.

The trouble you have taken, in order to the revival of this method, does you great credit ; and the publication of it must prove useful to unprejudiced persons, who will *fairly* make the experiment.

I know your intention to be honourable and disinterested, in thus stepping forward to serve your afflicted fellow-creatures. If you cannot persuade yourself to put your own name to the next edition of your pamphlet, I do not decline to afford it my feeble sanction, by permitting the insertion of this letter ; but I hope you will see the propriety of informing the public to

whose benevolent exertions they are indebted
for so useful a treatise.

With due respect

I remain, Dear Sir,

Your obliged Friend,

WILLIAM BLAIR.

To W. H. TIMBREI, Esq.

LETTER II.

FEBRUARY 25, 1803.

Great Russel Street, Bloomsbury Square.

DEAR SIR,

I THANK you for the opportunity you have afforded me of perusing the account of your herniary truss, &c. which is printed in the XXth Volume of the TRANSACTIONS OF THE SOCIETY OF ARTS; and I am happy to learn that your improvements have been so honourably rewarded by that respectable Society.

Since I last wrote to you on this subject, many more occasions have presented themselves to me for the application of your truss and cushion; in all of which cases, I have received additional proof of the efficacy and importance of your plan. But, from circumstances that have recently occurred, I fear least your suggestions for the public good should be neglected or contemned on account of their *simplicity*!

The construction and application of bandages for Ruptures have been too commonly left in the

hands of illiterate workmen, unacquainted with the principles of mechanics, and with the nature of herniary complaints. The effect of such bandages, therefore, may either be very beneficial or very injurious, according as they are formed and applied: for a truss which does not act enough to sustain the lapsed bowel in its place, after it has been restored, is much worse than none; and one which acts too violently, or where it ought not to act at all, is likely to produce the most serious consequences to the patient.

By means of your contrivance, however, I find that almost any degree of pressure may be applied where it ought, and may be endured with perfect ease as well as safety.

I remain, Dear Sir,
Your humble Servant,

WILLIAM BLAIR.

P. S. I forgot to inform you, that various ruptured persons at the Bloomsbury Dispensary have been lately relieved, in consequence of your liberal donation for the purpose of providing Trusses, &c.

To W. H. TIMBREL, Esq.

EXTRACT

FROM THE TRANSACTIONS OF THE SOCIETY FOR
THE ENCOURAGEMENT OF ARTS, MANUFACTURES,
AND COMMERCE, VOL. XX. FOR THE
YEAR 1802. LONDON.

“ THE GOLD MEDAL of the Socieity was this Session voted to WILLIAM HALL TIMBREL, Esq. of Streatley, in Berkshire, for an improved HERNIARY TRUSS, and new-invented CALICO CUSHION. The following Account and Certificates were received from him. A Model of part of the Human Body, and the Trusses from which the annexed Engravings are taken, were presented by him to the Society, and are placed in their Repository.

“ SIR,

“ I DESIRE you will present to the Society of Arts, &c. a Model of part of the Human Body, to which I have applied the instrument called a Truss, for the purpose of effectually keeping up inguinal and scrotal Ruptures ; also, my new invention, the Calico Cushion. You will please to observe, that this subject is not intro-

duced to the Society, as arising from medical or surgical ideas ; but for the purpose, by mechanical means, of causing relief to many afflicted persons, and assisting the cause of humanity. It is with this view I bring forward the model and my inventions, and not for the sake of any premium or bounty from the Society.

“ I am, Sir,

“ Your humble Servant,

“ WILLIAM HALL TIMBREI.

“ May 12, 1802.

“ TO MR. CHARLES TAYLOR.”

“ SIR,

“ I BEG leave to explain the nature of those improvements in the Truss and Cushion, which I have had the honour of presenting to the Society of Arts, &c. Many of my suggestions are new. The whole system of immobility, and the combination of mechanical action, to produce sufficient pressure on the aperture or ring of the abdomen, are decidedly so, as well as the formation of the Cushion of Calico.

“ The hoop or spring part of the Truss is formed in an exact circular line with the pad.

The pad is broad, and nearly, though not entirely flat ; its neck is short, to lie in the hollow of the groin ; for, if the neck touched the thigh, the Truss would move and the rupture descend.

“ Not much edging of leather projects from the hoop, and but little stuffing is put on the inside, as it lessens the elasticity of the spring. A double Truss should be united behind, by a strap and buckle, to let out or take in ; and both the front and hind straps should be sewed nearly one inch backwarder than usual. These straps should also be lined and edged, to increase their power of action. I have substituted a buckle, and its double tongue received in a groove, for the usual brass knob on the pad of the Truss ; which buckle, with the thigh-strap, firmly fixes the lower part of the pad against the body.

“ The thigh-strap is made of wash-leather, stitched and lined with tape, to prevent its stretching ; and the end adjoining the buckle, is made of Neat’s leather.

“ This thigh-strap, the sewing thread being doubled, twisted, and well waxed, is looped

over the hoop part of the Truss, and in two lines of sewing is fixed thereto.

“ It is material to attend to the place of fixing the thigh-strap, which should be about one inch behind the great *trochanter*, or lower hip-bone, and in such a manner as to have a fair pull. This place cannot be exactly ascertained till the Truss is tried on the patient.

“ The necessity of properly fixing the thigh-strap on the hoop, to keep up the rupture, must be apparent; because, when the belly pushes against the pad, under B, the sewing at A, draws B close to the body. (*See the Engravings.*)

“ No truss can be permanently retained in its place, without a thigh-strap; but sometimes it may be useful to line it on the inside with soft flannel, in order to prevent its chafing the thigh.

“ I will now add the description and uses of the Cushions of coarse Calico, CC, and the instructions how to form one; first observing, that calico has elastic and adhesive properties, which do not exist in linen or flannel.

“ Cut or tear a slip of coarse calico, about twelve inches in length, and for adults, three inches in breadth; fold it into a square, of a

size that will project a quarter of an inch round the edges of the pad of the Truss, except that end next the thigh, which should have no projection beyond the neck of the pad. The rough edges of the cushion are worn upwards and downwards. Over the first slip many others are folded, or doubled on each other, to the thickness of about three quarters of an inch ; but the thickness must be regulated by the size of the patient. When the hollow in the groin is completely filled up, and the cushion quite immoveable, it is properly formed.

“ This Calico Cushion is to be worn under the pad or pads BB *, of the Truss : and from time to time an outer slip or two may be changed at pleasure for the purposes of cleanliness, or restoring the cushion to a proper degree of thickness.

“ This cushion, when judiciously made, even with a bad Truss, if it be in a line with the aperture, will materially assist in keeping upon a reducible rupture.

“ The properties of the Calico Cushion are,

“ First, that it protects the spermatic chord from being injured by the hard pad of the

* See Plate, Chap. VI.

Truss ; which injury, in common Trusses, often produces hydrocele *, inflammation of the spermatic vessels, hernia humoralis, &c. &c.

“ Secondly, by protecting the spermatic vessels from the injuries of pressure, it fulfils a *desideratum* never before obtained. It enables the patient to girt the Truss round the body with such an effective degree of tightness, that the rupture cannot descend.

“ Thirdly, by uniting the properties of softness and solidity, it yields to the form of the abdomen, and thus completely fills up the aperture, or ring, in the external oblique abdominal muscle, through which the rupture descends.

“ Fourthly, it affords an additional column of pressure ; and the Truss being tightly fastened, keeps the omentum and intestines, all round and above the aperture, in a state of quietude, preventing any internal or partial decent of the bowels, &c.

* An hydrocele is a tumour sometimes mistaken for an intestinal Rupture. That disease consists in an accumulation of water, and is therefore a species of dropsy. There are two kinds of hydrocele; the first is when the water is lodged in the cells of the membrana cellularis scroti, but this is generally a symptom of anasarca; the second, and only proper species is formed by water lodged within the tunica vaginalis of the testicle. The first is known by pits remaining for a time, where it has been impressed by the finger; the second is known by its gradual increase, elastic firmness, deep situation, and permanency. Surgical operations are the only modes of affording relief, whether radical or palliative.

“ It is necessary to repeat, that this Cushion, to obtain all its advantages, must be formed of separate slips, folded over each other, and not of one piece of calico.

“ The method which I have used of placing the Truss, is in an exact circular line round the body, directly above the fissure of the posteriors : and the edge of the hoop part lodging on, over, and above the great trochanter, below the margin of the hip-bone, will keep the pad or pads of the Truss on the abdominal ring, producing ease, effect, and immobility.

“ The Truss worn in the manner I describe, is not to be seen through the clothes, and it retains its elasticity a greater length of time than the old spiral Trusses.

“ When the double Truss is put on, it should be pulled so very tight as to make the flesh between the two pads rise to the thickness of the fore finger ; there will be no pain, for the pressure is only where it ought to be, immediately under the pad or pads of the Truss.

“ The thigh-strap also must be sufficiently short, and pulled close to the flesh, to have its action on B.

“ A single Truss will have the same action for a single rupture, by using the same methods.

“ By minutely following the above instructions, the reducible ruptured patient may be freed from pain or danger.

“ I have the honour to be, Sir,

“ Your most humble Servant,

“ WM. HALL TIMBREL.

“ December 7, 1802.”

“ Certificates have been received from Mr. William Blair, Great Russel street, Bloomsbury-square, and Mr. Thomas Payne, Brookstreet *, Members of the Royal College of Surgeons, in London, confirming, by cases in their own practice, the utility of the improved Trusses and Cushion, recommended by Mr. Timbrel.”

Transactions, etc. Vol. xx, p. 331, 340.

* These two certificates remain in the Society's possession, but were not published in their Volume of Transactions.

NEW
INVENTIONS AND DIRECTIONS
FOR
RUPTURED PERSONS.

PART I.

NEW INVENTIONS, &c.

CHAPTER I.

A LETTER OF PRELIMINARY INSTRUCTIONS TO A RUPTURED PATIENT.

FROM its great ease and convenience both to the writer and reader, I adopt the epistolary form. I therefore, Sir, hope to give you such clear instructions, as will enable you to be comfortable, if the Rupture is reducible. Your wonder will cease at my success, in keeping up Ruptures, when I tell you the reason; which is, that my method *really* effects *that* firm pressure, which was recommended by Mr. POTT, though not executed by him, or his truss-maker, under whose care I was. The oblique pressure did not enforce Mr. POTT's own idea; for the usual mode could not do it in a *sufficient* degree. Above the groin of every human be-

ing is a small aperture through which the intestine or bowel, &c. may descend, and which you must learn to reduce ; that is, return to its place whatever comes down, agreeably to these instructions. (See *chap.* 3.)

2dly. Then, under the pad of the Truss is to be worn a calico roller or cushion. (See *chap.* 5.) The *rough* edges of this cushion are to be worn upwards and downwards ; and it is to be about a quarter of an inch broader than the pad of the Truss, *except* the side next the thigh.

3dly. As to the method of wearing the truss. (See the *plate*, and *chap.* 6.) Place the lower edge of the hoop part of the truss as low down *behind* as the division of the posteriors, but no lower. (See *fig.* 1. 2.) Put it straight round the body, pull it as tight as possible : it will lodge a little above the lower hip bone, and remain in its place on the aperture. If you be already in possession of a Truss, wear it as directed ; for it must be a bad Truss indeed, that will not *then*, with the calico cushion, keep up a Rupture : but with a thigh-strap fixed to the hoop, and my buckle at the bottom of the pad, the Rupture cannot descend.

The thigh-strap should be *sewn* to the hoop part *after* being fitted on, about one inch behind the lower hip bone, (the great trochanter). I wish you to understand how necessary this is to be done, and *why* the thigh-strap sewn *fast* to the hoop (at *a*) should keep up the Rupture. It is, because when the belly *pushes* against the pad under (*b*), the sewing (at *a*) draws (*b*) *close* to the body.

Patients generally think—

First, that the Truss will drop off.

Secondly, that they are bound so tight they cannot walk. But,

Thirdly, In a short time they exclaim—I feel well ! I feel no Rupture !

Be assured, in a reducible case, if success does not attend you, the only cause that a failure can be attributed to is, the want of a literal, full, and accurate attention to my instructions. I also subjoin some *general* directions for the ruptured :

The patient should have two Trusses in his possession fit for use. He should never, night or day, be without his Truss on : for a cough in the night might produce a fatal descent and stricture ; and by permitting the Rupture to

descend, Nature has no chance of recovering the power of retaining the parts in their position.

He should, as soon as the complaint comes on, obtain medical advice ; and lose no time, “ as by delay adhesions may be formed, which might have been prevented *.” The patient himself should learn to sew the thigh-strap to the hoop part, and have by him more straps and calico cushions than Trusses.

All persons, even those who are not ruptured, should, when riding on horseback, wear leathern breeches ; as they keep the intestines in a state of quietude, therefore are less likely to become ruptured from violent exertions.

The utmost caution is necessary, to observe that the Rupture is reduced before the Truss be put on, or much harm, even death itself, might ensue ; and, in young males, the situation of the testes must also be attended to.

A *double* Truss, even for a single Rupture, is preferable, though not absolutely requisite ; it sits as easy as a single one, and perhaps, might prevent a Rupture on the sound side.

All Trusses should be applied while the patient is in a supine posture ; much harm may

* Mr. Pott.

ensue from their application, when standing up.

In all cases where Trusses are provided, a skilful surgeon ought to examine the patients and apply the Trusses ; for many instances have occurred of people wearing them, who never had a Rupture, and of others who, though ruptured, receive no benefit for want of careful management in the application of the Trusses they employed.

Females afflicted with reducible Ruptures in the groin, have adopted the methods here described, and with the usual success, though engaged in the most laborious work.

CHAPTER II.

THE AUTHOR'S CASE.

I CONCEIVE that a plain recital of my case and habits will elucidate my *methods*. In every part of this publication the reader will recollect, that *all* the observations are founded on facts within my own case, or the cases of others; and I believe it will appear, that these instructions are necessary to be known by the ruptured.

My Rupture came on at the age of twenty-two, while riding on horseback, both the omentum and intestine descended into the *scrotum*, and was there incarcerated many hours with dreadful agony. My surgeon in the country, who reduced it, sent me to a truss-maker in London, and who was one of the best: he made an excellent *formed* Truss. The late eminent Mr. PERCIVAL POTT, Surgeon, to whom the world will ever be indebted, inspected the Rupture.

I found the Truss of little use ; the thigh-strap, which was of cotton, was *not* fixed to the hoop, but it hitched on a brass knob on the pad and constantly slipped off. On the most trifling exercise the Rupture descended ; half my time was consumed in reducing it, and often in great pain. Above twenty times I have felt all the agonies of a strangulated gut, particularly about six years ago in Dublin, expecting my death for two days, and preferring that to the surgical operation.

Nausea, sweats, shiverings, cramps in the legs ensued ; death was my only prospect—when suddenly and unexpectedly, from the applications used by my surgeon, the Rupture became reducible ; and since my improvements were made it never descends, *except* when the Truss is removed, and *then* it comes down to a great size. So powerful are the combined effects of these improvements, that with *safety* I have performed the *most* violent exertions on foot and horseback.

From the same cause, the same happy consequences have attended labouring men, of all ages. I wear this double Truss with a steel spring night and day, without inconvenience ; and from its immoveable position and use, hap-

pily forget both the complaint and the Truss. For years, I laboured under, at times, the most excruciating pains from swelled testes ; the cause then did not occur to me : these pains were produced by the hard part of the pad of the Truss injuring the spermatic vessels.

A repetition of these dreadful pains from a rough journey in a mail coach opened my eyes, about four years since ; and, from an idea accidentally communicated to me, I adopted the use of, and by various experiments brought to perfection, the calico cushion, since which time the pains in the testes have ceased. Twenty-two years ago I attempted my plan of immobility ; but did not succeed, the spermatic chords being unprotected.

I should observe, that some of the *same* Trusses which were useless to me *before* the improvements were used, are *now* quite effectual.

CHAPTER III.

THE MODES OF REDUCING A RUPTURE.

IN cases of strangulated intestine, or of stricture, the patient should lay on the side of his body *contrary* to that on which the Rupture is ; by which position, there must be a *lateral* recession of pressure from the aperture, which will give ease when the intestine or omentum cannot from inflammation *return* through the aperture.

Another position, in cases of difficulty is, to lay upon a chair with its back on the floor, the patient's heels to be placed against the wall, and his head on the ground.

Let the breath be held in, before an attempt is made to reduce the bowel ; for the acts of breathing and speaking contribute to force down a Rupture.

Cover the fingers with your shirt or handkerchief, by which means the Rupture is gathered up with more certainty and despatch.

To render the practice easy to every one, I use the expression *knead* the bowel upwards through the aperture, as dough is *kneaded* * ; but during a state of inflammation, press upon the intestines very gently, if at all.

By comparing the ruptured side of the body with the sound side, it may be seen and felt when the Rupture is reduced.

Method makes every thing easy, therefore observe the following directions in the *order* in which they are placed :

1. Lay down. The head is to be lowered, and the knees to be drawn up, or the heels to be raised.

2. Hold in the breath.

3. Be perfectly silent.

4. Cover your fingers with the shirt or handkerchief.

5. *Knead* up the Rupture.

6. Put on the Cushion and Truss.

7. Draw the thigh-strap under your thigh *very tight*, and buckle it to the pad.

* In the act of kneading, the fingers are to be extended and drawn forwards, gently and shortly.

CHAPTER IV.

ON THE CONSTRUCTION OF A TRUSS.

THE pad should be *broad* and *flattened*, though not *entirely* flat. A pad of this kind causes more pressure than those which have a round elevation in the centre, from a false idea of producing pressure *into* the aperture; and the neck of the pad should be short, for if it be so long as to lay on the thigh, the Truss would move, and the Rupture descend. A short necked Truss will lay in the hollow of the groin.

The hoop or spring part of the Truss must be formed in an exact horizontal or circular line with the pad.

Not much edging of leather should project from the hoop of the Truss, nor any quilting or stuffing.

The thigh-strap is to be made of *wash-leather*, *lined* with moderately thick tape, to prevent its stretching; the end adjoining the buckle to be of neat's leather. The thigh-strap to be *sewn*

with strong *double* thread well waxed, to the hoop part of the Truss, and looped over it : by *this fixture* of the thigh-strap *, pressure will act on the bottom part of the pad of the Truss. (See *plate, a. b.*).

The *bottom* part of the pad of the Truss is the material part that stops the aperture : I have invented a *double-tongued* buckle, instead of the lower brass knob ; this buckle *draws* and *fixes* the bottom of the Truss close to the abdomen. There should be a groove in the buckle for the tongues.

Any Truss, constructed contrary to the above directions, will fail of keeping up a Rupture with *certainty*.

The double-tongued buckle is to be placed on the pad, in such a manner, as to have effect ; the cross front strap should be lined and edged, which adds to its power.

In all and every part of the Truss, in its sewing, its straps, its appendages, observe only one idea, and execute it : let there be ACTION, and materials of the best quality.

* I must repeat, that the thigh-strap, from its importance, cannot be sewn to the hoop part of the Truss till *after* the Truss has been fitted on ; then sew it nearly one inch behind the lower hip bone, or the great trochanter, which projects *below* the thigh joint ; and from experience, I say, no Truss without a thigh-strap can be completely efficacious.

The *dangers* of a circular steel spring have been mentioned : a Truss cannot have proper effect without a steel spring ; it is not the spring, but the hard part of the pad of the Truss that is dangerous, and has ruined many a man *.

The double Truss should be *united* behind by a double-tongued buckle and strap, to let out or take in ; and not formed in *one* horrid hard steel spring, cutting the loins to pieces : which kind of Truss becomes useless from not fitting, if the patient increases or diminishes in bulk.

* There are cases, in which, I think, a *steel* spring cannot be used without danger ; but those cases, I believe, exist only in infants or very young persons, whose bones are soft, and the body in a rapid state of increasing bulk from growth. In these cases it is desirable to try the effect of a leathern girdle with the pad, as usual ; this being applied straight round the body as directed, and with the calico cushion, perhaps, might keep up a Rupture. Another objection against the use of a steel spring in young children, is, that they are apt to wet and rust the spring continually ; so that it quickly breaks, or loses its power of acting on the Rupture.

CHAPTER V.

THE DESCRIPTION AND USES OF A CUSHION OF
COARSE CALICO, WITH INSTRUCTIONS HOW TO
FORM IT.*

ON the tight application of the cushion, the patient is also relieved from all rumbling pains arising from the internal and partial descent of the Rupture, and from its combined qualities we accomplish the most difficult attainments ; being enabled to inflict pressure on substances naturally too tender to bear pressure, and thereby enforce a system of *immobility* ; without the adoption of which, the use of all Trusses are inefficacious.

It is necessary to add, that neither fine, old, nor washed linen, will have the desired effect ; and a cushion after use, having acquired its form, is better than a new one.

* See " Extract from Transactions, etc." p. xxv.





Oblique Line of Action.

CHAPTER VI.

ON THE MODE OF WEARING THE TRUSS, FOR AN INGUINAL OR SCROTAL RUPTURE.

THE mode of putting a Truss on the human body has appeared so easy, as not to be considered as an art.

The immutable laws of motion were not adopted in the usual mode of wearing the Truss: it was the custom to raise the spiral hoop part *on* the hips, (See *plate*, representing the oblique line of action,) several inches *higher* than the pad part; by which method, a false and oblique line of action was adopted, with but little pressure on the aperture *. The hinder part of the Truss was always put very many inches too high.

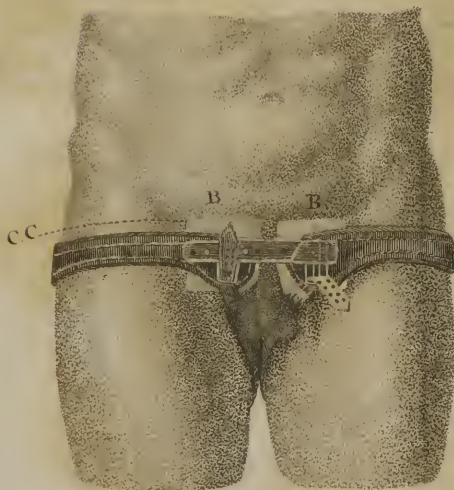
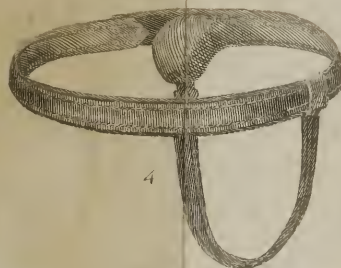
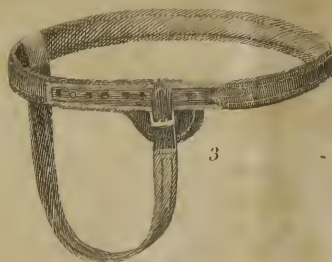
* In like manner, if the bandage put round the arm after bleeding, was to be placed one part of it disproportionately higher than the other, there would not be sufficient *pressure* to keep the compress on the orifice of the vein, and the patient might bleed to death.

The following mode is adapted for Ruptures in the groin: (See *plate, fig. 1, 2.*—*Fig. 3, 4,* are single Trusses.)

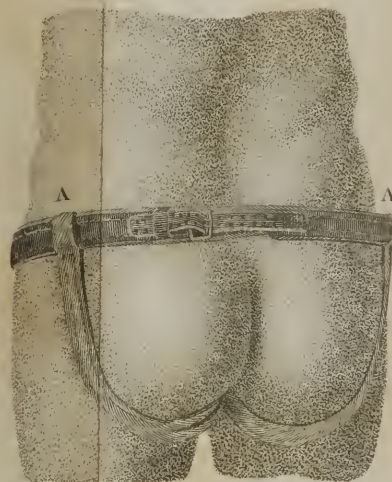
Place the hind part of the hoop of the Truss as *low* down*, as the fissure or division of the posteriors, but not lower; continue the hoop part or parts in an *exact* circular line round the body, (the spring of the Truss being made in a horizontal direction). This mode, the edge of the hoop lodging on, over, and above the great trochanter, and below the margin of the hip-bone, will keep the pad or pads of the Truss *on* the apertures; producing to the wearer the most effective action, and removing the Truss from a painful, galling, moveable situation, to an easy, comfortable, and *immoveable* one.

But it is necessary to *unite all* the improvements here suggested, to produce entire safety and effect, more particularly by strongly *sewing* the thigh-strap to the hoop part of the Truss; then draw this strap as *tight* and close as possible round the thigh to the *buckle* on the pad of the Truss: tightness of girding decreases, rather than causes the galling, by lessening friction.

* Agreeably to Mr. *Arnaud's* own directions and words.



1. Piece for Traps before



2. Piece for Traps behind

When the double Truss is put on as it ought, it should be pulled so very tight *, as to make the flesh, *between* the two pads, rise to the thickness of the fore-finger. There will be no pain; for the pressure is *only* where it ought to be, on the pad or pads of the Truss.

The single Truss should be pulled as tight as possible; the cushion enables it so to be done, and *two* brass knobs should be invariably on the upper part of every Truss.

Patients, whose Ruptures could not be kept up, and who had, for above twenty years, tried all kinds of Trusses, are now by this management rendered completely comfortable, and perform all necessary exercises.

* The hinder strap also, that unites the two parts of the double Truss, should be properly tightened, *and kept so.*

CHAPTER VII.

CAUTIONS AGAINST DUMB BELLS.

I MUST point out one possible cause of Rupture, both inguinal and umbilical ; I mean *dumb bells*, which are used both in our armies and our boarding-schools, for the purposes of expanding the chest, or obtaining exercise within doors. One case of a gentleman came to my knowledge, who became ruptured in the act of using dumb bells, which caused these observations. Let their violent action on the body be observed, and their possible effect is obvious. I hope this caution will either banish the use of them from our armies and schools ; or, at least, put persons on their guard, in having recourse to such dangerous bodily exertions. The *skipping rope* would be a good substitute for dumb bells.

CHAPTER VIII.

SHORT RECAPITULATION OF THE AUTHOR'S IMPROVEMENTS.

1. **T**HE *fixture* of the thigh-strap to the *hoop* part of the Truss, invented by the Author above twenty years ago.

2. A buckle and its double tongue on the pad, with a groove for the tongues, instead of a brass knob.

3. The manner of applying the thigh-strap.

4. The calico cushion.

5. The mode of wearing the Truss.

6. The application of the laws of motion.

EXPLANATION OF THEIR USES.

1. The strap draws and applies the lower part of the pad of the Truss to the body, and which *lower* part keeps up the Rupture.

2. It *fixes* the pad against the body.

3. It draws the thigh-strap *close* to the flesh, thereby enforces the actions of 1 and 2.

4. See Chapter V.

5. Exchanges pain, inutility, and mobility, for ease, utility, and immobility.

6. Produces mechanical effect.

CHAPTER IX.

ON THE PERMANENT CURE OF RUPTURES.

John Green [I SHALL not presume to give my own opinion on this subject, but most seriously recommend to the perusal of the ruptured some few quotations ; and request they will recollect, that they were the opinions of one of the first surgeons in Europe, the late PERCIVAL POTT, Esq. of St. Bartholomew's Hospital. I must remind the ruptured man, that he has been in all ages, and yet is, a *marked* character for depredation, by all sorts of *unprincipled* persons.

A curer of Ruptures asked a friend of mine one hundred guineas to cure his complaint ; he was to lay in bed six weeks, and live chiefly on one diet : fortunately, the patient knew too much of the world to do as he was desired—"pay before hand" ; and after all, his complaint was not a true Rupture, as had been erroneously supposed.

The doctrine of the cure of Ruptures is a mine of wealth to the Rupture-mongers, and of plunder and misery to the patient. Mr. POTT says, in his Treatise on Ruptures, Sect. 13, *Attempts towards a radical Cure*, “No disease has ever furnished such a constant succession of quacks as Ruptures have. Our present newspapers daily supply us with a number of the lesser dealers in specific medicines and new invented bandages, by which the poor and credulous are gulled out of what little money they can spare. Operative quackery is not indeed so frequent, or so readily submitted to; but I wish I could say, that more than one life has not been destroyed in our time, by attempts to form and support the character of an operator in this disease. To this kind of hazard the poor are luckily not so liable, as it can only be worth the while of these Rupture doctors to MURDER those who have before hand been simple enough to pay them well for it.

“I have already said, that to replace the prolapsed body or bodies within the cavity of the belly, and to prevent their falling out again, by means of a proper bandage, is all that the art of surgery is capable of doing in this dis-

ease. Whether Nature will be capable of so contracting the part as to prohibit a future descent or not, is a matter of great uncertainty, and which can be known only from the event.

“ This is a subject in which mankind are much interested, and on which a good deal might be said ; but, as an honest attempt to save the afflicted from the hands of those who have no character to lose, and whose only point is money*, might, from one of the profession, be construed into malevolence and craft, I will not enter into it ; but shall conclude, by wishing that they who have capacity to judge of these matters, (which are as much the objects of common sense as any other kind of knowledge), would not suffer themselves to be deluded by the impudent assertions of any *charlatans* whatever ; but determine in this, as they do in many other things, that is, by the event.

“ In short, if they who have so much credulity as to be inclined to believe and trust these lying impostors, would only defer the payment of them till they had completed their promises, the fallacy would soon be at an end.”

* The Author feels the propriety of Mr. Pott's observations.

The ruptured patient goes unrelieved from patentee to patentee, from truss-maker to truss-maker, and laments his wretched Rupture ; when the only lamentable fact is, that he has a wretched Truss, more wretchedly put on.

In the reign of King George the First or Second, the parliament granted five thousand pounds to a pretended curer of Ruptures.

I must quote from the ingenious Mr. White's Antiquities of Selborne, in Hampshire, an anecdote he there relates, of a rustic mode of *curing* Ruptures in children :—" At Tring, in Hertfordshire, a young ash tree is sawn partly in two, the ruptured child is drawn *nine* times *through* the middle of the tree, which is then closed up, covered with clay, and tied together ; if the tree lives, the child is to be cured of its malady."

I have heard of the same *judicious* method in other places ! ! !

CHAPTER X.

ON THE PHENOMENA OF RUPTURES.

I CALL the phenomena of Ruptures those events that are not to be easily accounted for. A Rupture will sometimes cure itself ; that is, the intestine will resume its position and health, even in adults, without any apparent cause ; as happened to myself, on the right side, about twenty years ago, and also to a friend of mine. I have heard of other similar cases ; but no man can reasonably expect such an event, and remain indifferent with his disorder.

A Rupture may have a proneness of descent for weeks together, the patient being in equal health, and using no exertion but walking across a room ; and yet, at other times, it will keep up, though exertion is used, and the same Trusses on.

A Rupture unattached, either of the intestines or omentum, will, sometimes, very suddenly recede into its place, without any assistance from the patient. This is more especially apt to occur, immediately after a violent looseness of the bowels.

CHAPTER XI.

PAROCHIAL, AND HOSPITAL CONSIDERATIONS, ON RUPTURES.

IT is to be lamented, in a country peculiar for its humanity and wisdom, that the indigent, who are ruptured, should suffer merely from want of due exertion in their behalf. That a fellow-creature should languish for years and become burdensome to his parish, because a few shillings are not expended in a Truss, is most absurd, as well as cruel.

The parishes in London, in some measure, provide Trusses for their poor ; but I fear, that in the country, many parochial officers know not what a Rupture is, and the ruptured wretch only knows by his agonies. I wish in every parish in England there was a charitable subscription to furnish Trusses, and to have them ready for their own poor or their children ; and,

that an indigent man could as easily get a Truss, as a loaf, from his parish officers.

It would be highly useful, if the well-disposed would leave legacies to those of our hospitals that receive ruptured patients in cases of strangulated hernia, for the specific and sole purpose of buying *Trusses* : one hundred pounds only, would do much good. The hospitals can maintain the patients, but not provide them with Trusses, from the nature of their establishment.

I knew a woman who had endured the operation, and other instances of ruptured patients, who were obliged to be discharged without Trusses ; for want of which, after a single day's labour, they might have been in the same miserable situation again.

PREFACE TO PART II.

MONS^r. ARNAUD's Treatise on *Herniæ* or *Ruptures*, being out of print, and Mr. POTT's admirable Treatise being chiefly, though not solely, for the use of professional men, it is hoped the following extracts from those works will benefit society, by disseminating familiar information on that subject ; for there is nothing more dreadful, than "to labour under a troublesome disorder, perhaps in the most joyous and active part of life*."

A Rupture cannot be prevented, but, in general its consequences may. And probably, the unhappy death of a late illustrious Duke might have been prevented, if *he* had known the exact nature of his malady, and the means of obtaining EARLY relief.

* Mr. Pott.

A FAMILIAR ACCOUNT
OF THE
NATURE OF RUPTURES.



PART II.

A FAMILIAR ACCOUNT, &c.

LETTER. I.

MY DEAR SIR,

I WISH to excite an universal attention to *Herniæ* or *Ruptures*, and to diffuse such a general knowledge of this subject, as is absolutely necessary to be known by every one, from the proneness of the human body to such complaints.

The great PERCIVAL POTT, Esq. late Senior Surgeon of St. Bartholomew's Hospital, not only enlightened the profession by his important surgical discoveries, but endeavoured also to give information to ruptured persons how to preserve themselves from the bad effects of "prejudices, of the prevalence of fashion, of tricks, quacks, of dealers in specific medicines

and new-invented bandages, and of rupture doctors, who have been largely rewarded when they ought to have been hanged."

The world is also highly indebted to Mons. ARNAUD, a French Surgeon, who practised in Paris about seventy years since, for his learned and familiar Treatise on Hernia or Ruptures.

I much admire this author, and shall make some quotations from him, though we *now* must smile at his "Ptisan," to cure Ruptures.—Page 161.

Leprosy was once the scourge of mankind, and thousands of hospitals were endowed for the cure and maintenance of lepers; yet now we scarcely know what is meant by such a complaint. The most dreadful complaints have been, and might be removed or alleviated, by human science.

The Small Pox once *unnecessarily* ravaged the earth: but thanks to LADY MARY WORTLEY MONTAGUE, who introduced inoculation; to BARON DIMSDALE for practising it, and also for the *cool* mode of treating that complaint; and to those medical men of the day, who adopted it: and especially to Dr. JENNER, for his Vaccine Inoculation. These days of evil are passing by!—And shall Hernia or Rupture

yet unnecessarily desolate mankind? And must the poor ruptured man be forgot, and live miserable, and die wretched? God forbid! Surely, Sir, it is worth our while to inquire into the very important position of mine, "That during the most laborious exertions, my instructions being observed, a reducibly ruptured patient in the groin, (the vertebræ and pelvis being naturally formed), may be as free from *pain* or *danger*, either from the disease or the instrument, as if he had no complaint."

Every feeling heart must deplore the death and sufferings of the late illustrious FRANCIS DUKE OF BEDFORD. His death was a *national* loss, and can only be *nationally* repaired, by its exciting an investigation into the best mode of effectually relieving Ruptures. To his friends, alas! there can be no reparation.

Indeed, Hernia or Rupture, has been, is, but I hope will not *long* be, such a scene of imposition, that a man cannot obtain a *general* belief for the hardest assertions. Rupture, like death, does not respect persons.

"Mors æquo pede pulsat.".....*Hor.*

Even the most illustrious suffer. Her Majesty Queen Caroline endured much from, and died of a naval Rupture, which she concealed.

The journals of the time state, that her Majesty Louisa Queen of Denmark, youngest daughter of His Majesty King George the Second, born Dec. 7, 1724, died in the last stage of her pregnancy of a Rupture, Feb. 19, 1757.

Poor Michael Servetus complained in a letter to those cruel Magnificent Lords at Geneva, who brought him to the stake, " That the pains of his Rupture, added to the sufferings of his confinement."

The late eloquent historian, Mr. Gibbon, suffered, and I believe died, in consequence of his Rupture, and his supine neglect of it. That a man of his sense should neglect himself, almost makes one suppose, there is something in Hernia which paralyses the human mind.

A physician, a few years since, carelessly left of his naval Truss, and died of a strangulated Hernia. I must not blame in others that idle and negligent conduct I have been guilty of myself.

Jean Jaques Rosseau was also a fellow sufferer.

In his family, who were respectable farmers in the county of Kent, Mr. L———— informed me of the following dreadful events : His mother

died of a Rupture, as likewise his uncle and his sister ; his brother has the same complaint ; and Mr. L—— himself, who suffered twenty years from the usual application of Trusses, is now completely comfortable by the *new mode*.

Indeed, Mons. Arnaud positively thinks, that *one* person in eight labours under this complaint ; others say, that a tenth, sixteenth, or a twentieth part of the human race is troubled with Hernias : either calculation enumerates a dreadful proportion !

LETTER II.

IGNORANCE is the foundation of human misery, therefore, Sir, let us inquire what is meant by a RUPTURE OR HERNIA.

“ By the term Rupture, Descent or Hernia, is in general meant a swelling, produced by the falling down, or protrusion of, some part or parts which ought naturally to be contained within the cavity of the belly*.

“ The places in which these swellings make their appearance, in order to form what is called a RUPTURE, are the groin, the *scrotum*, the *labia pudendi*, the upper and fore-part of the thigh, and every part of the anterior, or front part of the abdomen or belly.

“ The parts, which by being thrust forth from the cavity, in which they ought naturally to

* Mr. Pott.

remain, and which form these tumours, are a portion of the omentum, or a part of the intestinal canal, (that is, a part of the bowels), and sometimes, (though very rarely), the stomach.

“ From these two circumstances of situation and contents, are derived all the different appellations by which Hernia are distinguished : for example, they are called inguinal, scrotal, femoral, umbilical, and ventral, as they happen to make their appearance in the groin, cod, thigh, naval, or belly.

“ If a portion of intestine only forms it, it is called Gut Rupture ; if a piece of omentum only, Caul Rupture ; and if both intestine and caul contribute mutually to the formation of the tumour, it is called Compound Rupture : if the piece of gut or caul descends no lower than the groin, it is said to be incomplete ; if the scrotum be occupied by either of them, the Rupture is said to be complete.

“ Both the scrotal and femoral pass into the thigh out from the abdomen, (or belly), by openings, which are natural to every human body ; as well those who have not Ruptures, as those who have*”.

* Mr. Pett.

As these extracts are intended only for those who require common information, I think it is not necessary to follow Mr. POTT through all his anatomical researches, but only observe “The former Rupture, that is the *scrotal*, descends by means of an aperture in the tendon of the external oblique muscle near the groin, designed for the passage of the spermatic vessels in men, and the ligamenta uteri, in women; and the latter, under the hollow, made by Poupart’s, or Fallopiu’s ligament, at the upper part of the thigh, along with the great crural vein and artery*.

“The ligament of Fallopius is in the lower border of the tendon of the external oblique muscle of the belly, stretched from the fore-part of the os ileum, or haunch bone, to the pubis.

“The pair of muscles, called the oblique external ascending, cover all that part of the belly which is without bone, &c. They are fleshy on the sides, and tendinous in the middle and lower part; they spring from the seventh and eighth ribs, and are inserted into what is called the linea alba, the spine of the os ileum, and into the os pubis. At the lower part of the belly,

* Mr. Pott.

on each side, a little above the last mentioned bone, the fibres of the tendon of this muscle separate from each other, and form thereby two apertures, through which pass the spermatic vessels in men, and the ligamenta uteri in women. These openings are of an oval figure, &c. and are of a larger size in men than women.

“The inside of these muscles, and indeed the whole cavity of the belly, is lined with a smooth, firm, but easy dilatable membrane, called the peritonæum. I shall only observe it lines the whole abdomen, and gives an external coat to every viscous contained in it.

“Behind the peritonæum is a loose cellular membrane, by some called its appendix, which is found in different quantities, in different places. This cellular membrane, void of fat, surrounding the spermatic vessels, as they pass forth from the cavity of the abdomen into the groin, is called the tunica vaginalis of the chord; which chord descends through the groin, to the testis.

“The tunica vaginalis testis, is a membrane perfectly distinct from this tunica vaginalis of the chord.

“Let us remember the weakest part of the membrane, called peritonæum, is *opposite* to the

natural *opening* in the tendon of the external oblique muscle, and that the acknowledged use of the muscles of the abdomen, (or belly), is by pressing on all its contained viscera to assist digestion, the expulsion of the fæces, urine and foetus, and that in many natural actions, such as sneezing, coughing, &c. and in all great exertions of strength and force, our erect posture must necessarily occasion a pressure to be made against the lower part of the inside of the belly, by some of its contents; a very probable and satisfactory account of the origin of the common inguinal, (*i. e.* groin), and scrotal Rupture, may be collected.

“In young children this descent or protrusion happens most frequently when the child strains in crying, &c. ; as soon as the effort ceases, and the child is quiet, the part generally returns up again, and the swelling disappears. The nurses call it wind, and it is, at first, frequently neglected, as the child is not apparently injured by it, and few people are aware of its possible consequences.

“Adults are attacked by this complaint, either by falls, strains, great exertion of strength, difficulty of expelling hard fæces, or a general laxity of frame.

“ Whether the Rupture be inguinal, scrotal, or femoral, and whether it consists of intestine or omentum, or both, the protruded part must carry before it a part of the membrane which lines all the internal surface of the abdominal muscles, or rather the whole cavity of the abdomen ; and is called, peritonæum. This portion of the peritonæum, including the piece of gut or caul, is known by the name of the *hernial sac*, and is larger, or smaller, according to the quantity of intestine or omentum contained in it.

“ The signs, or marks, of a common inguinal, or scrotal Rupture are, in general, a swelling in the upper part of the scrotum, or in the groin, which tumour has a different appearance, and different feel, according to the nature of its contents, and to the state and quantity of them ; if a portion of intestine forms it, and that portion be small, the tumour is small in proportion : but though small, yet if the gut be distended with wind, inflamed, or have any degree of stricture made on it, it will be tense, resist the impression of the finger, and give pain on being handled. On the contrary, if there be no stricture made by the tendon, and the intestine suffers no degree of inflammation, let the

prolapsed piece be of what length it may, and the tumour of whatever size, yet the tension will be little, and no pain will attend the handling it: upon the patient's coughing, it will feel as if it was blown into, and in general it will be found very easy returnable.

“ If the Hernia be of the omental kind, the tumour has a more flabby, and a more unequal feel; and if the quantity be large, and the patient adult, it is, in some measure, distinguishable by its weight.

“ If it consists of both intestine and omentum, the characteristic marks will be less clear than in either of the simple cases.

“ The only disease with which a true Hernia can be confounded are, the venereal buboe, the hydrocele, and that defluxion on the testicle, called “ *Hernia humoralis*.”

“ It is to be observed, that the same kind of Rupture, in different people, and under different circumstances, wears a very various face.

“ If the subject be an infant, the case is not attended with much difficulty; the softness of their fibres generally rendering the reduction easy, as well as their descent.

“ If the patient be adult, and in the vigour of life, the consequences of neglect, or mal-treat-

ment, are more to be feared than at any other time, for reasons, too obvious to need relating. The great and principal mischief to be apprehended in an intestinal Hernia, is an inflammation of the gut, and an obstruction to the passage of the aliment and fæces through it.

“If the disease be recent, and the patient young, immediate reduction, and constant care to prevent its pushing out again, are the only means whereby it is possible to obtain a perfect cure.

“Though the portion of caul should remain uninjured in the scrotum, yet it renders the patient liable to hazard from another quarter ; it makes it, every moment, possible for a piece of intestine to slip into the same sac, and thereby add to the case all the trouble, and all the danger, arising from an intestinal Rupture.

“The *smaller* the portion is, of the gut which is engaged, the tighter the tendon binds, and the more hazardous is the consequence. I have seen a fatal gangrene in a bubonocoele, which had not been formed forty-eight hours, and in which the piece of intestine was little more than half an inch.

“Upon the whole, every thing considered, it may be said, that an intestinal Rupture is sub-

ject to worse symptoms, and a greater degree of hazard, than an omental one ; though the latter is by no means so void of either, as it is commonly supposed to be. That bad symptoms are more likely to attend a recent Rupture, than one of an ancient date ; that the descent of a very small piece of intestine is more hazardous, than that of a larger ; that the Hernia, which consists of gut only, is, in general, attended with worse consequences, than that, which is made up of both gut and caul : and that no true judgment can be formed, of any at all, unless every circumstance relating to it be taken into consideration*.”

I have, Sir, made quotations from Mr. POTT, on Ruptures in the groin and scrotal Hernias ; and will consider the femoral Rupture, which receives its name from its situation, the tumour occasioned by it being in the upper and fore-part of the thigh. “ To understand rightly the nature and situation of a crural or femoral Rupture, it is necessary to attend to the anatomical structure and disposition of the oblique descending muscle of the abdomen. Whoever does this will find, that that part of it which runs

* Mr. Pott.

obliquely downward from the spine of the os ileum, towards the symphysis of the os pubis, is tucked down, and folded inward, as it were. This edge or border, so folded in, is called Poupart's or Fallopius's ligament, as if it was a distinct and separate body, but is really no more than the inferior border of the tendon of the oblique muscle. In all the space between these two attachments, this tendon is loose and unconnected with any bone: all the hollow, which is made by the form of the os ilion, between the point of the attachment of the ligament, or tendon to that bone, and its other connection at the os pubis, is filled up by cellular membrane, fat, and glands; which parts are covered, and braced down, by a fine tendinous expansion, communicating between the tendon of the obliquus descendens abdominis and the fascia lata of the thigh.

“ Under this tendon, or ligament, the parts composing a Hernia pass, and produce a tumour, on the upper and fore-part of the thigh. The sac is generally described as passing over the crural artery and vein, which are said to lie immediately behind it; but whoever will examine the state of these parts in a dead subject,

will find that this is not a true representation : the descent is made on one side of these vessels, nearer to the the os pubis ; and the hernial sac, if it be not greatly distended, lies between the crural vessels, and the last-mentioned bone, on which it rests*.”

The Truss, applied as usual, in the groin, will generally prevent a descent into the thigh, by compressing the border of the oblique muscle.

The umbilical or navel Rupture, which I next consider, is so called from its situation ; and has, like the other, for its general contents, a portion of intestine, or omentum, or both.

“ Infants are very subject to this disease, in a small degree, from the separation of the funiculus, (or naval chord) ; but in general they either get rid of it as they gather strength, or are easily cured by wearing a bandage. It is of more consequence to get this disorder cured in females, even than in males, that its return, when they are become adult and pregnant, may be prevented as much as possible. During gestation it is often very troublesome ; but after delivery, if the contents have contracted no adhesion, they will often return, and may be kept in their place by a bandage*.”

* Mr. Pott:

I will now consider the ventral Hernia, which, as Mr. Pott says, “may appear in almost any point of the fore-part of the belly, but is most frequently found in or between the recti-muscles. The portion of intestine, &c. is always contained in a sac, made by the protrusion of the peritonæum; when reduced, it should be kept in its place by a bandage, and if attended with stricture, which cannot otherwise be relieved, must be carefully divided by a surgical operation*.”

I have thus, Sir, quoted from Mr. POTT, a plain account of Ruptures. The *inguinal*, *scrotal*, *femoral*, *umbilical*, and *ventral Rupture*; to each of which, a palliative cure or suspension of its dreadful effects, may be applied. As to a radical cure, Mr. POTT’s opinion has been sufficiently cited. He says, “that to replace the prolapsed body or bodies within the cavity of the belly, and to prevent their falling out again, by means of a proper bandage, is all that the art of surgery is capable of doing in this disease.”

The congenial Hernia, viz. that in which the intestine or omentum is found in the same cavity, and in *contact*, with the testis, is a species

* Mr. Pott.

of Rupture much more rare than the kinds of Rupture hitherto described.

This Hernia is peculiar to MALE subjects; and always happens a short time after birth, or when the testis descends into the scrotum. By much the most common Rupture in FEMALES, is that called *femoral* or *crural*, from its situation in the fore-part of the thigh, under Poupart's ligament.

LETTER III.

HAVING Sir, quoted from Mr. POTT and MONS. ARNAUD, information as to the nature of Ruptures, and the mode of treating them, I will now inquire, why Rupture has been such a source of human misery. The peritonæum being either dilated, protruded, or adhering, the opening through which the bowel passes must be stopped by artificial means, viz. an instrument, called a Truss. It is from the usual construction and application of this instrument, that its inefficiency produces so much misery and death, and from the ignorance of the patient in the art of reducing the Rupture, and properly fixing on the Truss. In almost all cases which are reducible, neither calamity need be the consequence.

Another cause of calamity, is an irreducible Rupture, which sometimes cannot be avoided :

but Mr. POTT says, “many, or *most* of these irreducible Ruptures *become so, by mere time and neglect*, and might at first have been returned ; but when they are got into this state, they are capable of no relief from surgery, but the application of a suspensory bag, to take off or lessen the inconvenience arising from the weight of the scrotum.”

What is meant by a strangulated or incarcerated Rupture is, that the intestine or caul, &c. is compressed at its upper part, so as to threaten a mortification, and cannot be returned into the cavity of the belly : it is constricted and bound in the aperture.

Mr. ARNAUD thus describes the consecutive symptoms of a strangulation :

“These symptoms are to be considered in their beginning, in their augmentation, in their decline. In the beginning the patient instantaneously feels an intense pain, in the part of the abdomen where the intestine is strangulated.

“In the augmentation, this pain spreads by little and little, but by intervals, through all the extent of the belly. In proportion as these pains augment, they are called gripes : the patient has a desire to vomit, which terminates in a copious discharge of thick and glaucous

saliva ; vomitings succeed the nauseas, and the discharge of saliva.

“ The first substance the patient vomits, is his food, if he has any in his stomach ; and some time after, he vomits pure bile ; the excrements and wind are then discharged by the mouth only, with great pain ; then the abdomen is inflated, and extended to the last degree, when a fever comes on, and also an hickup with convulsive spasms.

“ In the decline, the pulse becomes intermittent ; the patient vomits without efforts ; the wind is sometimes discharged downwards ; the abdomen becomes flat, and the extremities turn cold. The nose is pinched, and the eyes are fixed and staring : then death approaching, the parts fall totally into a mortification ; the gripes, the vomiting, and the hickup cease ; the Hernia becomes soft, the abdomen collapses or falls, and the patient dies in a miserable condition, without any possibility of affording him the smallest relief.”

As to the operation for a strangulated Hernia, I need not take up your time on that subject, as it concerns only professional men ; but the moment a strangulation is suspected to have taken place, the patient should go to bed, and

send for a surgeon. A few hours hesitation or delay may be fatal in its consequence !

My first part describes what a Truss ought to be, and accords totally with Mr. POTT's ideas, who says, " It can hardly be necessary to say, that the surgeon should be careful to see that the Truss fits, as his success and reputation depend on such care. A Truss which does *not** press ENOUGH, is worse than none at all, as it occasions loss of time, and deceives the patient or his friends ; and one which presses *too much*†, or on an improper part, gives pain and trouble, by producing an inflammation and swelling of the spermatic chord, and sometimes of the testicle."

——— Davis, washerwoman, often employed by Mr. Jordan Hookham, 100, New Bond Street : her Truss was unbearably applied in the usual way, and was both painful and useless—a Truss was applied on my plan : she says she does not now feel her Rupture on any occasion, when the Truss is on ; she carries pails of water up and down stairs with ease, and without pain ;—she has been examined by some gentlemen of

* Can a Truss, put on obliquely, press *enough*? Many years melancholy experience tells me NO.

† Horrid bars of iron, all in *one* piece, bruising the intestines and loins, etc. etc. which is a very gothic fashion, lately revived.

the faculty, who nobly, and immediately, adopted the improvements : the fact is also known to a board of gentlemen of the highest fortune and respectability.

In answer to the declarations “that it won’t do”, and all the CONSPIRACIES against these improvements that interest can suggest, take the following case :

A. B. complained to his surgeon, the Truss did not keep up his Rupture, though applied in our new way. I desired to see this man, in the presence of his surgeon: the Truss was fixed ; he was desired to jump off the edge of a sopha, three feet from the ground, as hard as he could ; he did : I desired his surgeon to examine if there was any descent, there was none : he then *ran* violently to the top of the house, jumped down six stairs at a time ; a fresh examination took place, and there was no descent. We had reasons for thinking he had been tampered with.

I hope, Sir, these familiar extracts will be of use to Ruptured persons.

DIRECTIONS TO THE BINDER.

The Plate of the Oblique Line of Action opposite
Page 45.

The other Plate, having Four Figures, at Page 46.

Med. Hist.

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